WATERSHED WRAP

Quarterly Newsletter from the Coeur d'Alene Tribe's Fish & Wildlife Program describing watershed management efforts. Offering readers food for conversation and paper for wrapping!

Summer Solstice 2004 (Vol. 8 No. 2)

The Coeur d'Alene Tribe's Fish, and Wildlife Programs work in a variety of cooperative, governmental and educational arenas in efforts to protect, enhance and restore our fish, and wildlife resources. This publication is intended to provide all people interested in fish, water and wildlife of the Coeur d'Alene Reservation information about our program, and to solicit your support as well as constructive criticism. Funding for this newsletter is provided by Bonneville Power Administration.

Thank you for your interest.
Respectfully,
Mark H. Stanger, Fish, Water, and Wildlife Outreach & Education Specialist

Attention Fishermen:

Rainbow trout stocking at Worley and Agency ponds will be June 21. Be sure to buy a fishing license. Don't forget they are now available at our new office at 401 Annie Antelope Rd in Plummer.

The Tribe Welcomes New Staff

By Mark Banas, Lead Water Resources Technician &
Mike Beckwith, Limnologist Water Resources

Hello, my name is Mark Banas. I am the new Lead Water Resources Technician for the Coeur d'Alene Tribe Water Resources Program. I am a graduate of the Water Resources Program at Spokane Community College, and have worked with the Spokane Field Office of the U.S. Geological Survey (USGS) while preparing for my new career. I am originally from Upstate New York, and made this area my home after retiring from the U. S. Marine Corps. I look forward to this new "assignment", and my wife Gloriana and I hope to make new friends in the community.

Good day, my name is Mike Beckwith, the newly hired Limnologist in the Water Resources Program. (Limnology is the study of lakes, integrating aquatic ecology, hydrology, water chemistry and other scientific disciplines to describe lakes as dynamic natural systems reflecting their surrounding environment and human activities). I am a native of Cheney, Washington, and near life-long resident of the Inland Northwest, with B.S. and M.S. degrees from Eastern Washington University. My professional experience in the environmental sciences includes: 4 years of "think tank" energy technology and policy research at Pacific Northwest National Laboratory; 7 years of water quality studies and regulatory affairs with Idaho Dept. of Environmental Quality; and 12 years with the USGS characterizing Coeur d'Alene Lake water quality, and the extent, magnitude, transport, and aquatic ecological effects of mining-associated contamination throughout the Clark Fork / Pend Oreille and Spokane River basins. Also I have been (at various times) a logger, ski patroller and mountain host, whitewater river and hunting guide, and independent environmental consultant/contractor. I look forward to serving in this challenging scientific capacity to support the wise management of Lake Coeur d'Alene and its surrounding watershed.

Lake Creek TMDL

By Dee Bailey, TMDL Specialist

The Lake Creek TMDL (Total Maximum Daily Load) for sediment was completed in February. TMDL states that at all flow ranges total suspended sediment may not exceed 40 mg/L. The TMDL was open for public comment from March 1 thru April 5, 2004. While open for public comment Idaho Dept. of Transportation and Kootenai Environmental Alliance submitted comments. A public meeting was held on March 15th, 2004 at the Rose Creek Longhouse in Worley to present the TMDL to the public and gather their questions. There were several landowners that attended the meeting to voice concerns that they had within the watershed. Their main concern was in how we go about getting back the big fish runs in the Creek. Tribal staff put forth several ideas on ways to improve the fisheries run. The Lake Creek TMDL can be viewed on the following websites: www.cdatribe-nsn.gov/depts/nr/water.html or www.epa.gov/r10earth/cdatribaltmdl.htm, or for a paper copy call (208) 686-0252 or (208) 686-1803.

Encroachment Update on Lake Coeur d'Alene
By Ed Hale, Lake Management

Given the attention the lake encroachment project has received you would expect that there is little else to say. That is not the case. While much of the media focuses attention on the conflicts between the project and upland owners, the *Wrap* is focused on actual work being done. Each day we learn a little bit more about how our waters are used and the structures that support use. Here is what we are quietly finding while the rancor goes on elsewhere.

The inventory of encroachments continues. For those of you unaccustomed to bureau-speak an encroachment is any structure below the high water mark, which is the line established by the fluctuations of water and indicated by physical characteristics such as a natural line impressed on the bank. Encroachments include docks, sea-walls, rip-rap, float homes, water withdrawal pumps, piers, jetties and most any structure that gets wet in the lake.

Most of our efforts to inventory have focused on docks. All the docks on Tribal Waters have been identified. We are now working on measuring all the docks and in the process identifying related encroachments. Table 1 shows the number and types of docks that have been identified.

Docks single 38 Docks multiple 55
Float homes 09 Boat Garages 42
Commercial and Associations 11
Co-op (over 5 slip) 1 Other 12
Total number 519

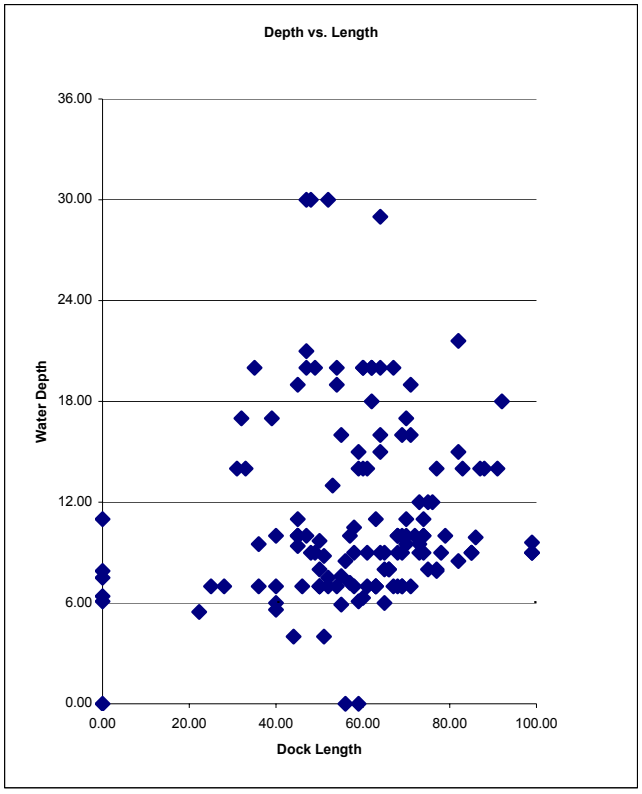
The commercial, association and co-op docks are difficult to deal with during a survey. Out on the water all you know for certain is what the dock looks like. Until we contact the owner we do not know what category they may be in. This is part of the next phase of the inventory, contacting all the owners.

Tribal Waters that are most affected by encroachment are Black Lake, the St. Joe River, and Lake Coeur d'Alene. Table 2 shows the distribution of docks on Tribal waters.

Black Lake	60
St. Joe River	97
Coeur d'Alene Lake	362
Total	519

This project is also measuring docks. The first priority was tagging. Now we are spending the time to go back and measure each dock. What we are finding is that many of the docks do not conform to the current construction standards. In general most of the 135 docks measured so far extend too far from shore and access deeper water than intended by the standards. This is a concern because each square foot of water covered by a private dock is removed from public use. The Tribe's intent stated in Tribal Code is to keep these waters public. Larger docks than necessary are contrary to this intent.

The Chart below shows the data collected so far on 135 docks. On average the docks are 60 feet long and extend into 11 feet of water. The current standards require docks 40 feet long, or can extend farther to reach 6 feet of water. It is apparent that our standards do not coincide with past practice. Resolving this difference will be a significant endeavor for the Department.



All the points in this figure that are above the six foot water depth line and also longer than 40 feet are in violation of the current standard. That is 85% of the docks measured to date. There is solace in the fact that we are not alone. Existing-non-conforming uses are a common aspect of land management. This type of situation is a challenge but no reason for anyone to panic.

As the inventory continues this summer we will learn more about our existing encroachments. This will help us to identify methods of dealing with the non-conforming uses and improving the current standards to address them.

Tribe's Lake Management Program Hires Lake Ecologist
By Dave Lamb, Lake Ecologist

After three years of interesting and productive work as a Wetland Biologist with the Tribe's Fisheries Program, I am pleased to announce

that I will be moving into the Lake Management Department as a Lake Ecologist. This will move me back into the realm of most of my pre-Tribe professional work – that is, lake improvement project development and implementation. This past experience has included water quality management through nutrient controls and aquatic vegetation management. As a result, I feel ready to 'dive' into the variety of issues that are of concern in Tribal lake waters. I will say, however, that I have very much enjoyed the stream habitat restoration work that I did while with the Fisheries Program, and this has definitely helped me gain an appreciation for the problems and processes taking place in the Reservation watersheds because these definitely effect the water quality in Lake Coeur d'Alene.

My primary project work for this coming summer will be an aquatic vegetation survey in the lower St. Joe River area; particularly Benewah, Chatcolet and Round Lakes. This is a two-year effort funded through the Coeur d'Alene Basin Commission aimed at assessing the species and densities of submersed plants present in these shallow-water areas. This study is also intended to estimate potential nutrient release from the submersed plant communities that will help determine the need for plant growth controls.

Other work that I am looking into includes inventory and improvement or protection of the existing navigational aids (pilings and signs) as well as the natural levees, which define the lower St. Joe River channel. Removal of large debris (like logs and derelict docks) from the lake and lakeshore has been described as a serious problem so I will be doing some inventory this year and grant writing to support removal over the winter. I also anticipate meeting with any interested lake group (property owners associations, civic organizations and other users groups) to talk about the quality of the various lakes and ways to protect or restore the water quality and associated "beneficial uses". I may even continue work in stream channel restorations

So, I know that I am moving into a position that will involve me in a lot of issues that are very important to people. I am prepared to bring my best professional judgment to play in bringing about needed improvements in the lake environments while representing the interests of the Tribe, lakeshore property owners and our fish and wildlife friends. If you have a suggestion for a lake improvement project, or would just like to ask a question about lake management, feel free to contact me at 208-686-6206 or e-mail dlamb@cdatribe-nsn.gov.

Water Awareness Workshop (WAW) at Lake Creek

By Mark H. Stanger, Outreach & Education

Every year is different at our Water Awareness Celebration Days. The schools that participated in WAW this year came from all over the northern Idaho: Coeur d'Alene, Cocolalla, DeSmet, Harrison, Sandpoint, and Worley areas. The weather is always interesting during WAW week; you never know if it is going to rain or snow. We only had one day of rain this year and although it was cloudy at times we still had good temperatures. The teachers and students all really enjoyed themselves. Some of the students said It was the best time they had all year, learning about the outdoors, working in the outdoors and getting out of the classroom was the best. Here are some of the stations the students went to: Tribal culture and language, Trout life cycle, Water quality analysis, Plant identification, Macroinvertebrate sampling and analysis, Soil analysis, and Wildlife habitat usage.

Again, this year there were over three hundred students, parents and teachers that attended our workshop. A real good turn out! I want to thank all the students, parents, and teachers that came to our workshop this year and I am looking forward to seeing new and more students next year.

May 2004 Flooding provides valuable flow data for Hangman Creek Restoration Project

By Bruce Kinkead, Fisheries Biologist

Remember a few weeks ago in mid-May with all that rain? Most people were trying to stay out of the weather and keep dry. But for some it meant opportunity, an opportunity to gather information relative to current conditions in reservation streams. Flows were rapidly dropping by early May indicating another drought year. But conditions on May 22nd were quite different and unusual for that time of year. These flow conditions were more like winter rain-on-snow events than late May.

That's why biologists and technicians with the Coeur d'Alene Tribe's Fisheries Program were out measuring flow on May 22nd. With news of Hangman Creek overflowing its banks, a normal Saturday turned into a busy day at work for Glenn Lambert, Ken Pluff, Todd Morris, and Bruce Kinkead taking flows in the Hangman Creek watershed. That same day, Dan Jolibois and Phillip Fulton were also out taking flow at Lake and Benewah Creeks. Some locations involved wading deep and swift currents using standard methods with flow meters. In other locations less standard methods had to be utilized in order to estimate flows.

Water depths and channel widths were measured and water velocities were estimated by floating oranges down a known length of channel. At the Stateline site a tape was used to measure distance from the top of the bridge to the water's surface. The nearby USGS station developed a known relationship between this stage reading and discharge. At the Hangman Creek water quality station at Stateline, flows went from 13 cfs (cubic feet per second) on May 15th to 2600 cfs at 2PM on May 22nd. Data analysis for other locations is not completed. But tributaries such as Mission and Smith Creeks experienced the highest flows overflowing their banks, while flow in Indian Creek was contained within its banks.

Water quantity is the most important variable when assessing and monitoring a watershed. Restoration of fish-bearing streams requires a thorough knowledge of the watershed hydrology. Knowing the flow patterns over the course of the year is important to fisheries biologists. A graphical representation of this pattern is called a hydrograph. A flat hydrograph would be an even flow over the course of the year and a hydrograph with huge spikes in winter and spring and low marks in mid summer would describe a flashy system such as Hangman Creek. A system must be able to store water during high flows and provide adequate flows during base flows in summer. Wetlands, groundwater, and backwater areas provide this storage. Without the proper storage, flooding in winter and spring occurs and streams dry up in summer. With this condition comes increased erosion of stream banks, sedimentation of spawning gravels, and increased suspended solids that cause numerous problems for fish. And in the case of this past flood event, gravels may be disturbed after spawning occurred washing eggs downstream.

Land use in watersheds influence how flashy a watershed is. The water cycle is a complicated set of variables that requires data of runoff variables: groundwater inputs, soil compaction and moisture content, evaporation, and transpiration. Heavily forested streams in high altitudes with year round groundwater input exhibit the most consistent flows and a flat hydrograph. Factors contributing to flashy hydrographs include: high road densities, compacted soils, removal of vegetation through logging and agriculture, and elevations and weather patterns that lead to rain-on-snow events. Increased late summer and fall flows can increase available fish habitat by decreasing temperatures and increasing dissolved oxygen. Tribal Fish & Wildlife Programs will continue to assess the hydrology of Hangman Watershed in hopes that increased knowledge will lead to solutions on how best to apply restoration resources. Discharge measurements will play an integral part in the monitoring of restoration sites.